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(54) Title: ANTIBODIES TO LIPOPROTEINS AND APOLIPOPROTEINS AND METHODS OF USE THEREOF

(57) Abstract

Compositions and methods using antibodies which are immunoreactive with specific apolipoproteins to determine the concentrations of lipoproteins such as HDL and LDL, and/or apolipoproteins in human blood, serum or plasma sample, are described. Monoclonal antibodies (MAbs) are described that specifically bind to epitopes present in apolipoproteins and lipoproteins, enabling rapid and reliable determinations of levels of specific blood lipoprotein and/or apolipoprotein levels, including Apo B-100, Apo A-I, Apo A-II, Apo C-III, and Apo E, and thereby determination of relative ratios of HDL and LDL and Lp<sub>AI</sub> and Lp<sub>II</sub>. In a preferred embodiment, the compositions are strips of a solid phase material coated with one or more of the antibodies and are referred to herein as "dipsticks". The dipsticks specifically bind a lipoprotein or apolipoprotein when dipped into a protein sample. The amount of lipid associated with a bound lipoprotein or the amount of apolipoprotein bound on the dipstick is quantitated using an appropriate method, for example, by staining with a lipid stain or reaction with a second labelled antibody. The intensity of the stain on the dipstick is proportional to the concentration of the lipoprotein lipid or apolipoprotein circulating in the blood and can be quantitated by comparison with standards containing known amounts of lipid.